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AUDIT REPORT FOR MEXICO

May 7 through May 24, 2001

INTRODUCTION

Background

This report reflects information that was obtained during an audit of Mexico's meat inspection system from May 7 through 24, 2001. Twelve of the thirty establishments certified to export meat to the United States were audited. Five of these were slaughter establishments; the other seven were conducting processing operations.

The last full audit of the Mexican meat inspection system was conducted in November/ December 2000. Eleven establishments were audited: seven (Ests. TIF-57, 86, 104, 114, 148, 150, and 209) were acceptable, three (TIF-89, 105, and 111) were evaluated as acceptable/re-review, and one (TIF-120) was unacceptable. A special follow-up audit of Est. 120 was performed in January 2001; it was then found to be acceptable. The major concerns during the last full audit of the Mexican meat inspection system were the following:

1. In Est.111, ante-mortem inspection did not fulfill FSIS requirements. *This had been corrected.*

2. Post-mortem inspection of viscera from U.S.-eligible carcasses was being performed by inspection personnel who were not full time employees of the federal government's meat inspection authority. *This had been corrected.*

3. Est. TIF-120 had not been delisted by SAGAR officials as a result of the decision, reached by the SAGAR State Supervisor who had led the audit, that the establishment did not meet U.S. requirements. The establishment was eventually delisted by FSIS's International Policy Division and SAGAR. *One establishment was found unacceptable during this new audit; it was immediately delisted by SAGARPA officials.*

4. There was no program in place for routine species verification of products produced in establishments where multiple species were processed. *SAGARPA officials were in the process of developing a new species verification program.*

5. The laboratories had failed to implement (1) the FSIS method for detection of *Salmonella* in PR/HACCP carcass sponge and ground meat samples representing products intended for export to U.S., (2) use of a procedure that would detect *E. coli* serotype O157:H7 in ground beef samples, (3) reliably compliant sponge sampling and testing of carcasses for

generic *E. coli* and methods for analysis and calculation of results, (4) oversight of the materials used for the sampling and the amount of diluent. *SAGARPA was preparing to implement the FSIS methods.*

6. Light was inadequate at inspection station in Ests. 57, 111, and 120. *This had been corrected in these three establishments; the problem was, however, now found in Est. 74.*

7. Insanitary dressing procedures were identified in Ests.105 and 111. *This had been corrected.*

8. Pest control was found to be inadequate in Ests. 89 and 120. *This had been corrected.*

At the time of this audit, Mexico was eligible to export fresh and processed beef and pork to the United States. Poultry products made from poultry imported directly from the United States were also eligible for export back to the U.S.; however, poultry inspection controls were not within the scope of this audit.

During calendar year 2000, Mexican establishments exported approximately 11.9 million pounds of beef, lamb, pork, and poultry to the U.S. Rejections at U.S. ports of entry (POE), for net-weight violations, transportation damage, defective labeling, and missing shipping marks, were 18,116 pounds. There were no POE rejections for public health reasons. Approximately 2.5 million pounds of beef, pork, and poultry product were exported between January 1 and February 28, 2001. No products were rejected at POE for public health reasons during this period.

PROTOCOL

This on-site audit was conducted in four parts. One part involved visits with Mexican national meat inspection officials to discuss oversight programs and practices, including enforcement activities. The second entailed an audit of a selection of records in the meat inspection headquarters facilities preceding the on-site visits. The third was conducted by on-site visits to establishments (seven establishments were randomly selected for records audits; eight establishments were selected randomly for on-site audits and four more were visited to assess improvements relative to past performance, having been evaluated as either re-review or unacceptable). The fourth part involved a visit to two laboratories, both performing analytical testing of field samples for the national residue testing program.

Mexico's program effectiveness was assessed by evaluating five areas of risk: (1) sanitation controls, including the implementation and operation of Sanitation Standard Operating Procedures (SSOPs), (2) animal disease controls, (3) residue controls, (4) slaughter/ processing controls, including the *Escherichia coli (E. coli)* testing program, and (5) enforcement controls, including the testing program for *Salmonella* species.

During all on-site establishment visits, the auditors evaluated the nature, extent, and degree to which findings impacted on food safety and public health, as well as overall program delivery. The auditors also determined if establishment and inspection system controls were in place. Establishments that do not have effective controls in place to prevent, detect and eliminate product contamination/adulteration are considered unacceptable and therefore ineligible to export products to the U.S., and are delisted accordingly by the country's meat inspection officials (this was the case with one establishment—see below).

RESULTS AND DISCUSSION

Summary

Effective inspection system controls were found to be in place in eleven of the twelve establishments audited; three of these (Ests. 74, 158, and 209) were recommended for re-review. One establishment (Est. 190) was found to be unacceptable. Establishment 190 was previously suspended by SAGARPA, but SAGARPA requested an on-site audit. Details of audit findings, including compliance with SSOPs and the testing programs for *Salmonella* species and generic *E. coli,* are discussed later in this report.

As stated above, eight major concerns had been identified during the last audit of the Mexican meat inspection system, conducted in November/December 2000. Most of these deficiencies were corrected, and the rest were scheduled for timely correction.

Compliance with the requirements for Hazard-Analysis/Critical Control Point (HACCP) systems was not within the scope of this audit, due to a special agreement between FSIS and the Mexican meat inspection officials prior to the audit.

Entrance Meeting

On May 8, a short entrance conference was held at the U.S. Embassy in Mexico City, attended by Mr. William Brant, Agricultural Minister-Counselor; Mr. Todd Drennan, Agricultural Attaché; and Mr. Salvador Trejo, Agricultural Specialist; the FSIS team consisted of Dr. Gary D. Bolstad and Dr. Oto Urban, International Audit Staff Officers. The general audit plan was discussed.

Another entrance meeting was held in the Mexico City offices of the Mexican Department of Agriculture, Livestock, Rural Development, Fisheries and Food (*Secretaria de Agricultura, Ganaderia, Desarollo Rural, Pesca, y Alimentacion, SAGARPA*), and was attended by Dr. Jorge Padilla, Director of Imports, Exports, Certification Services, and Fisheries; Dr. Ofelia Flores, Subdirector for the CENAPA laboratory; Dr. Alejandro Jiménez, Chief, Dept. of Federal Slaughter Establishments; Dr. Concepción Silva, Supervisor, Federal Slaughter Establishments; Dr. Isabel Ramos, Supervisor, Federal Slaughter Establishments; Mr. Salvador Trejo, Agricultural Specialist, U.S. Embassy in México City; and the FSIS team,

consisting of Drs. Gary D. Bolstad and Oto Urban, International Audit Staff Officers. Dr. Urban served as team leader for this audit. Topics of discussion included the following:

1. The itinerary and lodging arrangements were finalized.

2. The FSIS auditors (hereinafter referred to as "the auditors") provided detailed information on POE rejections for 2000 and the first two months of 2001.

3. The auditors provided the data-collection instruments they would be employing for compliance with the requirements of Standard Sanitation Operating Procedures, generic *E. coli* testing and the testing program for *Salmonella* species.

4. A summary of the changes in SAGARPA's upper-level personnel and organizational structure was provided to the auditors.

5. SAGARPA provided information to update the FSIS country profile of Mexico.

6. The auditors inquired about the status of SAGARPA's reply to the FSIS letter of inquiry regarding *Salmonella* testing of minor species. Dr. Padilla responded that the management officials of the only establishment that had slaughtered lambs and goats was no longer interested in being eligible for export to the U.S. and was no longer certified.

7. The auditors asked about the current state of SAGARPA's species verification program. The SAGARPA officials replied that the program was still in a developmental stage. The data gathered in the field during the audit are discussed later in this report.

Headquarters Audit

There had been considerable changes in the organizational structure of the upper levels of SAGARPA inspection staffing since the last full U.S. audit of Mexico's inspection system in November/December 2000. A full outline of the new structure was provided.

To gain an accurate overview of the effectiveness of inspection controls, FSIS requested that the audits of the individual establishments be led by the inspection officials who normally conduct the periodic reviews for compliance with U.S. specifications. The FSIS auditors observed and evaluated the process.

The FSIS team leader conducted a review of inspection system documents pertaining to the establishments selected for records review. This records review was conducted at the headquarters office, focused primarily on food safety hazards, and included the following:

- Internal review reports,
- Supervisory visits to establishments that were certified to export to the U.S.,
- Label-approval records, such as generic labels and animal raising claims,

- New laws and implementation documents,
- Pathogen reduction and other food safety initiatives,
- Sanitation, slaughter and processing inspection procedures and standards,
- Enforcement records, including examples of criminal prosecution; consumer complaints; recalls; seizure and control of noncompliant product; and withholding, suspending, withdrawing of inspection services from (or delisting) an establishment certified to export product to the United States.

The following concerns arose as a result the examination of these documents:

1. There was no documentation of any corrective actions taken in Ests. 45, 100, or 154 in response to sanitation problems.
2. In Est. 237, a sanitation deficiency had been recorded, but there was no documentation of a corrective action.
3. There was no differentiation between the pre-operational and operational sanitation activities in Ests. 100, 150, and 237.
4. There was no documentation of operational sanitation activities in Est. 154.

Government Oversight

All inspection veterinarians and inspectors in establishments certified by Mexico as eligible to export meat/poultry products to the United States were full-time SAGARPA employees, receiving no remuneration from either industry or establishment personnel.

Establishment Audits

Thirty establishments were certified to export meat and/or poultry products to the United States at the time this audit was conducted. Twelve establishments were visited for on-site audits. In eleven of the twelve establishments visited, both SAGARPA inspection system controls and establishment system controls were in place to prevent, detect and control contamination and adulteration of products.

Laboratory Audits

During the laboratory audits, emphasis was placed on the application of procedures and standards that were equivalent to U.S. requirements. Information was also collected about the risk areas of government oversight of accredited and approved private laboratories, intra-laboratory quality assurance procedures, including sample handling, and methodology.

The National Center for Analytical Verification Services for Animal Health in Cuernavaca was audited on May 21, 2001. Except as noted below, effective controls were in place for sample handling and frequency, timely analysis, data reporting, tissue matrices for analysis, equipment operation and printouts, minimum detection levels, recovery frequencies, percent recoveries, and corrective actions. The methods used for the analyses were acceptable. No compositing of samples was done (this was not a deficiency).

Only two findings gave rise to some cause for concern:

1. Many (more than 100) meat samples, recently received from the field and in the process of being catalogued, were placed together on a steel table. A considerable amount of blood had collected on the table under the samples, with a significant possibility for cross-contamination. During the course of the audit, a letter was composed by Dr. Ofelia Flores, Subdirector for Verification, and addressed to the Chief of the Toxic Residues Dept., mandating initiation of measures to prevent cross-contamination between samples.

2. The recovery expected by FSIS for heavy metals is at least 80%. The SENAPA laboratory's acceptable recovery started at 70%. The significance of this difference is being evaluated.

The field Laboratory for Toxic Residues (CIAD) in Hermosillo was audited on May 16, 2001. The following concerns arose:

1. The country's annual sampling plan had not been provided to the laboratory.

2. There was a turnaround time (the time period between sample receipt in the laboratory and the completion of analysis) of up to two months for several analytical results because many backup samples had been requested from the field and were awaiting processing. FSIS expects turnaround times of 30 calendar days.

3. The interlaboratory check samples were not performed every two months as required.

Establishment Operations by Establishment Number

The following operations were being conducted in the twelve establishments:

Beef slaughter and boning - two establishments (TIF-105, and 111)
Beef cutting – one establishment (TIF-120)
Pork slaughter, boning, and cutting - two establishments (TIF-66, and 74)
Beef and pork processing – two establishments (TIF-86, and 190)

Beef patties – one establishment (TIF-114)
Pork, chicken and turkey processing – two establishments (TIF-158, and 209)
Pork, beef, chicken grinding, tamales – one establishment (TIF-169)
Pork skin popping operation – one establishment (TIF-271)

SANITATION CONTROLS

Based on the on-site audits of establishments, Mexico's inspection system had controls in place for chlorination procedures, back siphonage prevention, sanitizers, separation of establishments, pest control monitoring, temperature control, operations work space, inspector work space, ventilation, facilities approval, product contact equipment, ante-

mortem facilities, outside premises, sanitary dressing procedures, product transportation, and pre-operational sanitation.

Sanitation Standard Operating Procedures (SSOPs)

Each establishment was evaluated to determine if the basic FSIS regulatory requirements for SSOPs were met, according to the criteria employed in the U.S. domestic inspection program. The data collection instrument used accompanies this report (Attachment A).

The SSOPs were found to meet the basic FSIS regulatory requirements, except as noted below:

1. Inadequate documentation of operational findings and corrective actions relating to condensation control was observed in Ests. TIF-158, 190, and 209.

2. Inadequate documentation of pre-operational findings and corrective actions was observed in Est. TIF-169.

3. There was no differentiation between pre-operational and operational sanitation activities in Ests. TIF-66, 74, 100, 150, and 237.

4. In Est. TIF-237, a sanitation deficiency had been recorded, but there was no documentation of a corrective action.

5. There was no documentation of operational sanitation activities in Est. TIF-154.

6. There was no documentation of any corrective action taken in Ests. TIF-45, 100, or 154 in response to sanitation problems.

Cross-Contamination

1. In Est. TIF-66, an employee inserting large plastic liners into containers for product allowed the liners to contact his boots. Establishment management officials took immediate corrective actions.

2. Swine heads were contaminated through contact with a small stepladder in Est. TIF-66 during loading of carcasses into a truck for transportation. Establishment management officials took immediate corrective actions.

3. Pallets stacked on their edges were in direct contact with large sacks of non-meat ingredients in Est. TIF-158. They were separated, but the sacks were not cleaned before being opened and used.

4. The employee at the final carcass wash station in Est. TIF-105 was allowing water to splash from walls and from the floor back onto the carcasses. This deficiency had been identified during the previous FSIS audit. Corrective actions were immediate.

5. The drainage hose from the splitting saw was contacting the floor and then the carcasses in Est. TIF-105. Management officials took immediate corrective action.

6. In Est. TIF-190, a dirty pallet was allowed to contact the edge of a large worktable containing edible sliced ham being packaged. No corrective actions were taken until the FSIS auditor pointed out the need.

7. Workers in Est. TIF-190 allowed a section of casing to contact the floor and continued to load it onto the filling machine to be used.

Over-Product Equipment

1. In Est. TIF-111, one area of rusty overhead structures and a small amount of exposed insulation were observed in one carcass cooler. Management officials immediately scheduled corrective maintenance.

2. Heavy condensation buildup on a vertically opening door, under which exposed product was being transported, resulted in steady dripping in Est. TIF-158. Management officials ordered immediate corrective actions.

3. In Est. TIF-158, considerably neglected maintenance and cleaning were evident on many over-product structures in many areas of the establishment. Old, discolored product residues, dirt, and flaking paint were clearly visible directly over exposed product and containers ready for exposed product. SAGARPA officials ordered prompt development of improved programs for maintenance, cleaning, and monitoring both by management personnel and SAGARPA personnel assigned to the establishment.

4. Rust and flaking paint were observed on over-product structures in many areas of Est. TIF-190.

5. Flaking paint and considerable rust buildups were observed on mixer motors directly over exposed product in Est. TIF-209. NOTE: the same problem had been identified during the previous FSIS audit (11/30/2000). SAGARPA officials ordered prompt resolution.

6. Rust and flaking paint were observed on over-product pipes in the areas where exposed frozen beef patties were being weighed and cartons with liners were stored, ready for filling with the frozen patties, in Est. TIF-114. The management officials ordered the cartons moved and scheduled prompt maintenance of the overhead structures.

Over-Product Ceilings

1. In Est.TIF-158, meat scraps, flaking paint, loose sealant, holes, and in one area a large gap next to a light fixture that opened directly into the attic above, were present in ceilings directly above large hoppers of exposed product in several production areas.

Management officials gave assurances that improved maintenance and cleaning would be implemented promptly.

2. Product was stored below an icicle that had formed at a hole in the ceiling in cooler #3 and below a cooling unit pipe with dripping condensation in cooler #2 in Est. TIF-169. In both cases, product was removed from under the problem areas and re-inspected, and elimination of the sources was scheduled.

3. In Est. TIF-190, deteriorated and crumbling ceilings were observed in at least two exposed-product areas, including directly over an unclean plastic strip curtain that was wet with condensation and ice, at the entrance to the raw meat storage freezer.

4. Heavy condensation was dripping from ceilings onto exposed product in a packaging room in Est. TIF-209. The management officials ordered the line to be stopped and the shift's production to be retained and samples submitted for microbiological examination. NOTE: condensation problems had been identified during the previous FSIS audit (11/30/2000).

5. In Est. TIF-209, condensation was observed in a packaging room, directly above exposed product. The product on the line was packaged as quickly as possible, but the remaining product continued to be placed in open containers directly under the problem area, to be subsequently sealed. The management officials ordered the shift's production to be retained and samples submitted for microbiological examination.

Equipment Sanitizing

There was inadequate separation between exposed product and cleaning of used equipment in Est. TIF-74. Management officials took corrective actions.

Hand Washing Facilities

1. There was no hand-washing station at one main entrance to the injection room in Est. TIF-158; it was necessary to climb steep stairs and use a handrail to reach the soap and water. Management officials agreed to install a new hand-wash station inside the entrance.

2. All hand-washing facilities in production areas had hand-operated water controls in Est. TIF-190.

Product Handling and Storage

1. Excessive ice and snow were observed on many cartons of finished product (boneless pork) in the blast freezer and in the storage freezer in Est. TIF-66. Management officials gave assurances the problem would be addressed in a timely fashion.

2. In Est. TIF-158, pallets were stacked on other pallets of cartoned product and packaging materials without adequate protection of the products and materials from the undersides of the stacked pallets. Also, in a cooler for raw product, large scraps of wood from deteriorated pallets and large pools of liquid that had fallen from other pallets of product stored directly above were found on the thin plastic protective coverings of raw meat; some of these linings had torn. No direct product contamination was seen. Management officials implemented immediate corrections.

3. Condensation was dripping from the ceiling directly above a boning table in Est. TIF-105. Product was not affected. Management officials took immediate corrective actions.

4. Several cartons of boneless beef were stored under a dripping pipe in a freezer in Est. TIF-105. Management officials removed the affected cartons for repackaging.

5. The protective plastic coverings on several large cardboard containers of meat in Est. TIF-114 had come away from the edges of the containers so that the meat was exposed; these were stored directly below other wooden pallets containing other similar containers of meat. The Veterinarian-In-Charge ordered the containers with the exposed product to be reinspected for contamination after thawing and implementation of an improved program of monitoring for inadequately covered meat.

6. In Est. TIF-190, containers of exposed product and cartons of finished product were routinely placed on floors and on dirty pallets, on which workers routinely walked as if they were floors, in many areas of the establishment.

7. Numerous instances of containers of exposed product stored under insanitary conditions were observed in freezers, including in contact with a wet and dirty plastic strip curtain in Est. TIF-190. No immediate corrective actions were taken.

8. Finished product (ham in plastic casings) was stored in unclean containers and under dripping condensation in one cooler in Est. TIF-190. No immediate corrective actions were taken.

9. In Est. TIF-209, inadequately protected non-meat ingredients were stored in unclean containers and below the unprotected undersides of wooden and plastic pallets (some of the wooden pallets were deteriorated and broken). SAGARPA officials ordered a new policy of storage and monitoring.

10. Excessive ice and snow were found on packaged product in the main freezer in Est. TIF-74. Corrective actions were immediate.

<u>Maintenance</u>

1. In Est. TIF-66, flaking paint was observed on a wall adjacent to a processing table for pork tongues. Improved maintenance was scheduled.

2. Rust and flaking paint were present on over-product areas of the chipper for frozen beef slabs in Est. TIF-114. Prompt corrective actions were scheduled by the management.

3. In Est. TIF-120, exposed insulation was observed in several exposed-product areas and deteriorated insulation in two carcass coolers. The Veterinarian-In-Charge of the establishment identified the problem and ordered prompt corrective actions.

4. Numerous instances of unprofessional wiring (exposed connections, wrapped with plastic tape) were seen in various areas in Est. TIF-190.

5. Product equipment parts, gloves, and bags of chlorine for disinfectant baths were stored under insanitary conditions on rusty steel shelves and in steel cabinets in production areas in Est. TIF-209. SAGARPA officials rejected the rusty shelf unit and ordered cleaning and regular monitoring of the cabinets

Product Reconditioning

A worker in Est. TIF-111 was scraping, rather than cutting, grease and small pieces of hair from beef tails and not sanitizing her knife. The SAGARPA officials took immediate corrective actions.

Personnel Hygiene and Practices

1. Not all establishment personnel were washing their hands upon entering production areas after passing through plastic strip curtains in Est.169. This had been identified during the previous FSIS audit (11/12/99). Corrective actions and preventive measures were immediate.

2. In Est. TIF-190, the vast majority of establishment employees failed to wash their hands when entering production areas from other areas. Furthermore, none of the establishment employees who handled a dirty strip curtain washed their hands upon entering production areas until the FSIS auditor set the example.

3. An employee in Est. TIF-271 was observed to fail to wash his hands after contaminating them by touching the floor before continuing to work with product. The establishment officials took immediate corrective action.

Water potability

1. No microbiological analysis of the water in the backup well in Est. TIF-105 had been conducted during the past year (the main water supply was municipal; well water had not been used during the past year). Management officials gave assurances a water sample would be analyzed promptly.

2. Routine water potability checks conducted in November 2000 and January 2001 revealed fecal coliform bacteria in the water line supplying the injection room in Est. TIF-74. No production had been conducted in the affected area until the water system was cleaned and sanitized. Subsequent water potability tests were acceptable.

Operational Sanitation

A large opening, some 15x24 inches, was present at head-height in a wall between one of the main production areas, with a large amount of exposed product, and an adjacent room containing a running compressor (with much air motion), dirty wooden boxes, dusty unused equipment, and other detritus in Est. TIF-190.

Pest Control

In Est. TIF-74, many flies were observed in various areas of the establishment; also, a bait station in the ante-mortem area was damaged and empty.

Lighting

Lighting was inadequate in two carcass coolers in Est. TIF-74. Corrective actions were scheduled.

Waste Disposal

1. In Est. TIF-190, nearly all the waste containers in production areas had hand-operated lids. The SAGARPA official leading the audit informed the management officials that this was unacceptable, but no immediate corrective actions were taken.

2. Several waste containers in Est. TIF-86 had hand-operated lids. They were immediately removed and discarded.

Dry Storage Areas

1. Many packaging materials and non-meat ingredients were stored under insanitary conditions in various areas in Est. TIF-190.

2. A ventilator to the outside was not sealed against insects in Est. TIF-74. Also, in the men's toilet areas, screens were open to the outside, and there was a large opening in the wall. Management officials said they would correct the problem.

Personnel Dress and Habits

In Est. TIF-190, several employees working directly with edible product were wearing thick leather lifting belts outside their protective clothing, and some of these belts were observed to come into direct contact with the workers' knives and with the meat they were working with. The SAGARPA official identified the problem, but no corrective actions were taken.

Other Product Areas

Product equipment parts, gloves, and bags of chlorine for disinfectant baths were stored under insanitary conditions on rusty steel shelves and in steel cabinets in production areas in Est. TIF-209. SAGARPA officials rejected the rusty shelf unit and ordered cleaning and regular monitoring of the cabinets.

Welfare Facilities

In Est. TIF-74, employees' street clothing was not adequately covered by protective clothing during operations. Corrective actions were immediate.

Repeat findings were observed in Ests. 105 and 209.

ANIMAL DISEASE CONTROLS

Mexico's inspection system had controls in place to ensure adequate animal identification, dispositions, condemned and restricted product control, and procedures for sanitary handling of returned and rework product.

1. In Est. TIF-120, the veterinarian who was supposed to be inspecting split carcasses was sick. The veterinarian responsible for viscera inspection had not taken over the split carcass inspection as of the time of the audit (she was, however, observing the outside surface of the un-split carcasses carefully). She immediately began inspecting the internal cavities as well.

2. There was excessive crowding of animals in the antemortem area, with the result that effective observation from both sides in motion was highly unlikely in Est. TIF-74.

There were reported to have been no outbreaks of animal diseases with public-health significance since the previous U.S. audit.

A program had been prepared by company veterinarians for dealing with additives of concern in feed mills. Only approved feed from Mexico, the United States, and Europe was used on farms. A daily report, with a serial number, was published, containing information on medicated feed.

Veterinary drugs were under the control of farm veterinarians. Veterinary assistants can administer animal drugs only under the supervision of a farm veterinarian.

There were three types of farms, producing animals for human consumption:

1. Integrated industry: The same company owns the farm and the establishments performing the slaughter and processing operations, and also usually distributes the final product.

2. Semi-integrated industry: Farmers raise and sell their animals to a company for slaughter and processing.
3. Family business: Animals are custom-slaughtered on the premises on which they are raised.

Meat for exported product usually originated on integrated-industry operations, with the result that traceback of animals to the farms of origin was easily ensured.

RESIDUE CONTROLS

Mexico's National Residue Testing Plan for 2001 was being followed, and was on schedule.

The Mexican inspection system had adequate controls in place to ensure compliance with sampling and reporting procedures and storage and use of chemicals.

Three deficiencies were identified regarding the use and storage of chemicals:

1. In Est. TIF-114, chemical compounds were stored in a wire-mesh-enclosed area directly below exposed wooden pallets, and general housekeeping was poor. SAGARPA officials ordered prompt correction.

2. In Est. TIF-190, a spray container of disinfectant was kept directly on a machine used for sealing sliced ham, very close to the exposed product. The FSIS auditor pointed this out and it was removed, but it was again placed in the same location a few minutes later.

3. Unmarked chemicals were found in several areas of the establishment in Est. TIF-209. Corrective actions were planned.

SLAUGHTER/PROCESSING CONTROLS

The Mexican inspection system had controls in place to ensure adequate humane slaughter, boneless meat reinspection, identification of ingredients, control of restricted ingredients, formulations, packaging materials, laboratory confirmation, label approvals, inspector monitoring, processing schedules, processing equipment and records, empty can inspection, filling procedures, container closure examination, interim container handling, post-processing handling, incubation procedures, and processing defect actions.

HACCP Implementation

Review of compliance with HACCP requirements was not within the scope of this audit.

Testing for Generic *E. coli*

Mexico had adopted the FSIS regulatory requirements for E. coli testing.

The five slaughter establishments audited were required to meet the basic FSIS regulatory requirements for generic *E. coli* testing, and were audited and evaluated according to the criteria employed in the U.S. domestic inspection program. The data collection instrument used accompanies this report (Attachment C).

The *E. coli* testing programs were found to meet the basic FSIS regulatory requirements. In Est. TIF-74, the sponge method was used for collecting samples for testing, while incision method criteria were used for the evaluation of the test results.

All the establishments visited had adequate controls in place to prevent meat products intended for Mexican domestic consumption from being commingled with products eligible for export to the U.S.

The following slaughter/processing control problems were encountered:

Sanitary Dressing

A small amount of fecal contamination was found on one of sixty carcasses examined in Est. TIF-105. It was immediately trimmed.

Pre-boning Trim

Approximately one-fourth of carcasses that had passed the pre-boning trim station in Est. TIF-74 were contaminated with grease. The Veterinarian-in Charge ordered corrective actions.

Documentation

1. There was no documentation of any corrective action taken in Ests. 45, 100, or 154 in response to sanitation problems.

2. Inadequate documentation of operational findings and corrective actions relating to condensation control was observed in Ests. 158, 190, and 209.

3. There was no differentiation between pre-operational and operational sanitation activities in Ests. 66, 74, 100, 150, and 237.

4. In Est. 237, a sanitation deficiency had been recorded, but there was no documentation of a corrective action.

5. There was no documentation of operational sanitation activities in Est. 154.

6. Inadequate documentation of pre-operational findings and corrective actions was observed in Est. 169.

ENFORCEMENT CONTROLS

Inspection System Controls

Except as noted below, and with the exception of the unacceptable establishment (Est. TIF-190), the SAGARPA inspection system controls [ante-and post-mortem inspection procedures and dispositions, control of restricted product and inspection samples, control and disposition of dead, dying, diseased or disabled animals, boneless meat reinspection, shipment security, including shipment between establishments, prevention of commingling of product intended for export to the United States with domestic product, monitoring and verification of establishment programs and controls (including the taking and documentation of corrective actions under HACCP plans), inspection supervision and documentation, the importation of only eligible livestock or poultry from other countries (i.e., only from eligible countries and certified establishments within those countries), and the importation of only eligible meat or poultry products from other counties for further processing] were in place and effective in ensuring that products produced by the establishments were wholesome, unadulterated, and properly labeled. In addition, adequate controls were found to be in place for security items, shipment security, and products entering the establishments from outside sources.

The following deficiencies were found:

In Est. TIF-111, the majority of the beef carcasses in the coolers did not have legible marks of inspection. The SAGARPA officials ordered prompt implementation of a new system of applying the official stamps.

Approximately 10% of carcasses in the coolers in Est.TIF-120 had no legible marks of inspection. SAGARPA officials gave assurances that this would be corrected promptly.

There were no supervisory reports for March or April 2001 in Est. TIF-120 (the establishment was producing for U.S. export during these months).

No species verification was being performed on final product in Est. TIF-169. Note: no product had been exported to the U.S. since 1997. The establishment management intended to begin, however, within the foreseeable future; SAGARPA officials gave assurances that species verification would be initiated in the near future.

In Est. TIF-209, no species verification was being performed on final products (multiple species were processed). This was discussed during the final exit meeting with SAGARPA officials in Mexico City; a program was in the final stages of development.

Testing for *Salmonella* Species

Five of the establishments audited were required to meet the basic FSIS regulatory requirements for *Salmonella* testing, and were evaluated according to the criteria employed

in the U.S. domestic inspection program. The data collection instrument used accompanies this report (Attachment D).

Samples for *Salmonella* testing were collected by the inspection personnel. Testing for *Salmonella* was performed both in a government laboratory (CENAPA) and also in certified private laboratories. SAGARPA officials had decided to use the FSIS method for *Salmonella* analysis.

SAGARPA had assured FSIS that Mexico's *Salmonella* testing program was the same as that employed by FSIS, with exception of the following equivalent measures:

LABORATORIES. Private laboratories analyze samples.

- The approval/accreditation process for private laboratories is done in accordance with Mexico's Federal Animal Health Law, the Federal Law on Metrology and Standardization, the Criteria for the Operation of Animal Health Testing Laboratories, and the Characteristics and Specifications for Facilities and Equipment for Animal Health Testing and/or analyzing Laboratories. The approval/accreditation process and on-going verification are conducted by Mexico (SAGARPA).

- Private laboratories have properly trained personnel, suitable facilities and equipment, a written quality assurance program, and reporting and record-keeping facilities.

- Test results are sent from the private laboratories directly to the General Directorate of Animal Health of the Government of Mexico.

  Species Verification

  At the time of this audit, Mexico was not exempt from the species verification requirement**.**

  In some establishments in which multiple species were processed, species verification was being performed on final products by SAGARPA personnel, in some (e.g., Est. TIF-86) by management officials, and in others no species verification was done. When samples are collected for residue testing in slaughter establishments, the samples are routinely subjected to species verification. The auditors were informed that a general policy for species verification was being developed, and this was discussed briefly during the entrance and exit meetings. The auditors recommended that SAGARPA officials provide a detailed outline of the new program to the FSIS Equivalence Branch as soon as possible, and that they include in that program species verification of all final products such as sausages, franks, salami, tamales, burritos, and meat in sauce, produced in establishments which process meat from multiple species.

- Monthly Reviews

  FSIS requires documented supervisory visits by a representative of the foreign inspection system to each establishment certified as eligible to export to the United States, not less frequently than one such visit per month, during any period when the establishment is engaged in producing products that could be used for exportation to the United States.

  These reviews were being performed by the Mexican equivalent of Area Supervisors. All were veterinarians. Dr. Alejandro Jiménez was in charge of the federally inspected establishments. The internal reviewers reported their findings to him and he then decided what action should be taken. Routine reports were sent by mail but in the case of noncompliance, results were conveyed by telephone.

  The internal review program was applied equally to both export and non-export establishments. Annually scheduled reviews were announced in advance and were conducted at times by individuals and at other times by a team of reviewers. Reviews organized by State Supervisors were sometimes announced, sometimes not. They were conducted at least once monthly in establishments producing and exporting product to the U.S. The records of audited establishments were kept in the inspection offices of SAGARPA in Mexico City, in State offices, and in the establishments, and were routinely maintained on file for a minimum of one year.

  In the event that an establishment is found, during one of these internal reviews, to be out of compliance with U.S. requirements, the supervising inspector performing the review would immediately inform SAGARPA headquarters. SAGARPA would then initiate a prompt review of that particular establishment. If, during this audit, deficiencies are found to persist, the establishment is removed from the list of establishments certified as eligible to export to the U.S.
  The time interval with which U.S. agriculture officials are notified of an establishment's delistment had improved significantly when compared with the interval in effect before the change in administration. Establishment 190 was found unacceptable during its audit on May 17; the U.S. embassy was notified of the delistment within two working days. Under the old system, this procedure took up to six weeks due to a need to obtain original signatures from numerous officials.

Monthly supervisory reports were found to be complete in all the establishments visited, with the exception of Est. TIF-120 (there were no reports on file for March or April 2001).

Enforcement Activities

The "Federal Animal Health Act" gave SAGARPA enforcement responsibilities and duties. One portion of this document deals with "Complaints" and the other with "Administrative Sanctions". In case of complaints, the secretary of Agriculture orders the investigation of the complaint, which must be accomplished within of 15 days. Administrative sanctions are imposed in the form of letters and fines. Fines can range from 500 to 100,000 Mexican pesos (approximately U.S. $55 to $11,000). Other sanctions, in cases of repeat violators, include

double fines, then temporary and final suspension. After one violation the individual is suspended from producing product in the meat industry. After a second violation, the violator is not allowed to work in the meat industry.

Exit Meetings

An exit meeting was conducted in Mexico City on May 23. The Mexican participants were Dr. Jorge Padilla, Director of Imports, Exports, Certification Services, and Fisheries; Dr. Alejandro Jiménez, Chief, Dept. of Federal Slaughter Establishments; Dr. Concepción Silva, Supervisor, Federal Slaughter Establishments; Dr. Isabel Ramos, Supervisor, Federal Slaughter Establishments; Mr. Salvador Trejo, Agricultural Specialist, U.S. Embassy in México City; and the FSIS team was represented by Drs. Gary D. Bolstad and Oto Urban, Interna-tional Audit Staff Officers.

The findings encountered in the course of the audits were discussed, and the SAGARPA officials gave assurances that improvements would be enforced and monitored, especially regarding:

- storage of product and/or product contact equipment in Ests. TIF-66, 74, 105, 114, 158, 169, 190, and 209;
- maintenance and/or cleaning of over-product equipment and/or ceilings in Ests. TIF-66, 111, 114, 120, 158, 190, and 209;
- prevention of cross-contamination in Ests. 74, 66, 105, 158, and 190;
- condensation control in Ests. TIF-105, 158, 190, and 209;
- personal hygiene in Ests. TIF-74, 169, 190, and 271; and
- documentation of pre-operational and operational sanitation activities, findings, corrective actions, and preventive measures.

The auditors had been informed that a general policy for species verification was being developed, and this was discussed briefly during the exit meeting. The auditors recommended that SAGARPA officials provide a detailed outline of the new program to the Equivalence Branch as soon as possible, and that they include in that program species verification of all final products such as sausages, franks, salami, tamales, burritos, and meat in sauce, produced in establishments which process meat from multiple species.

CONCLUSION

The inspection system of Mexico was found to have, except as noted above, effective controls to ensure that product destined for export to the United States was produced under conditions equivalent to those which FSIS requires in domestic establishments.

The general impression of the auditors regarding the Mexican meat inspection system as a whole was one of considerable improvement, compared with the findings resulting from the previous several audits.

Twelve establishments were audited on-site. Eight were acceptable, three were evaluated as acceptable/re-review, and one was unacceptable (it is noteworthy that the latter had been previously identified by SAGARPA officials and suspended from U.S. eligibility). The deficiencies encountered during the on-site establishment audits, in those establishments which were found to be acceptable, were adequately addressed to the auditors' satisfaction.

Dr. Oto Urban
International Audit Staff Officer

(signed) Dr. Oto Urban

ATTACHMENTS

A. Data collection instrument for SSOPs
B. Data collection instrument for HACCP programs (not applicable)
C. Data collection instrument for *E. coli* testing
D. Data collection instrument for *Salmonella* testing
E. Laboratory audit form
F. Individual Foreign Establishment Audit Forms
G. Written Foreign Country's Response to the Draft Final Audit Report (no comments received)

Attachment A-1

Data Collection Instrument for SSOPs

Each establishment was evaluated to determine if the basic FSIS regulatory requirements for SSOPs were met, according to the criteria employed in the U.S. domestic inspection program. The data collection instrument contained the following statements:

1. The establishment has a written SSOP program.
2. The procedure addresses pre-operational sanitation.
3. The procedure addresses operational sanitation.
4. The pre-operational procedures address (at a minimum) the cleaning of food-contact surfaces of facilities, equipment, and utensils.
5. The procedure indicates the frequency of the tasks.
6. The procedure identifies the individuals responsible for implementing and maintaining the activities.
7. The records of these procedures and any corrective action taken are being maintained on a daily basis.
8. The procedure is dated and signed by the person with overall on-site authority.

The results of these evaluations were as follows:

Est. #	1.Written program addressed	2. Pre-op sanitation addressed	3. Oper. sanitation addressed	4. Contact surfaces addressed	5. Fre-quency addressed	6. Respons-ible indiv. identified	7. Docu-mentation done daily	8. Dated and signed
66	√	√*	√	√	√	√	√	√
74	√	√*	√	√	√	√	√*	√
86	√	√	√	√	√	√	√	√
105	√	√	√	√	√	√	√	√
111	√	√	√	√	√	√	√	√
114	√	√	√	√	√	√	√	√
120	√	√	√	√	√	√	√	√
158	√	√	√	√	√	√	√	√
169	√	√	√	√	√	√	√*	√
190	√	√	√	√	√	√	Inadeq.	no
209	√	√	√	√	√	√	√*	√
271	√	√	√	√	√	√	√	√

66, 74 There was daily documentation of pre-operational and operational sanitation activities, but there was no differentiation between the two.

74 There was no documentation of preventive measures.

169 There was daily documentation of pre-operational and operational sanitation activities that was much improved since the last FSIS audit (11/12/1999), but the pre-op. sanitation documentation was still in need of some improvement.

209 There was excellent documentation of pre-operational activities, but the documentation of condensation control did not contain description of observations, corrective actions, or preventive measures.

Data Collection Instrument for SSOPs (continued)

Documentation was also audited from the following establishments that were not visited on-site, during the centralized document audit:

Est. #	1.Written program addressed	2. Pre-op sanitation addressed	3. Oper. sanitation addressed	4. Contact surfaces addressed	5. Fre-quency addressed	6. Respons-ible indiv. identified	7. Docu-mentation done daily	8. Dated and signed
45	√	√	√	√	√	√	no	√
57	√	√	√	√	√	√	√	√
100	√	√*	√	√	√	√	no	√
118	√	√	√	√	√	√	√	√
150	√	√*	no	√	√	√	√	√
154	√	√	√	√	√	√	no	√
237	√	√*	√	√	√	√	no	√

100, 150, 237 - There was daily documentation of pre-operational and operational sanitation activities, but there was no differentiation between the two.

Attachment C-1

Data Collection Instrument for Generic *E. coli* Testing

Each establishment was evaluated to determine if the basic FSIS regulatory requirements for generic *E. coli* testing were met, according to the criteria employed in the U.S. domestic inspection program. The data collection instrument contained the following statements:

1. The establishment has a written procedure for testing for generic *E. coli.*
2. The procedure designates the employee(s) responsible to collect the samples.
3. The procedure designates the establishment location for sample collecting.
4. The sample collection is done on the predominant species being slaughtered.
5. The sampling is done at the frequency specified in the procedure.
6. The proper carcass site(s) and/or collection methodology (sponge or excision) is/are being used for sampling.
7. The carcass selection is following the random method specified in the procedure or is being taken randomly.
8. The laboratory is analyzing the sample using an AOAC Official Method or an equivalent method.
9. The results of the tests are being recorded on a process control chart showing the most recent test results.
10. The test results are being maintained for at least 12 months.

Est. #	1.Written procedure	2. Sampler designated	3.Sampling location given	4. Predomin. Species sampled	5. Sampling at the req'd freq.	6. Proper site or method	7. Sampling is random	8. Using AOAC method	9. Chart or graph of results	10. Results are kept at least 1 yr
66	√	√	no	√	√	√	√	√	√	√
74	√	√	√	√	√	√	√	√	no	√
86	√	√	√	√	√	√	√	√	√	√
105	√	√	√	√	√	√	√	√	√	√
111	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
114*	√	√	√	√	√	√	√	√	√	√
120	√	√	√	√	√	√	√	√	√	√
158	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
169	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
190	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
209	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
271	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

114 – Product tested: ground beef.

Data Collection Instrument for Generic *E. coli* Testing (continued)

Documentation was also audited from the following establishments that were not visited on-site, during the centralized document audit:

Est. #	1.Written procedure	2. Sampler designated	3.Sampling location given	4. Predomin. Species sampled	5. Sampling at the req'd freq.	6. Proper site or method	7. Sampling is random	8. Using AOAC method	9. Chart or graph of results	10. Results are kept at least 1 yr
45	√	√	√	√	√	√	√	√	√	√
57	√	√	√	√	√	√	√	√	√	√
100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
118	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
150	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
154	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
237	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment D-1

Data Collection Instrument for *Salmonella* testing

Each slaughter establishment was evaluated to determine if the basic FSIS regulatory requirements for *Salmonella* testing were met, according to the criteria employed in the U.S. domestic inspection program. The data collection instrument included the following statements:

1. Salmonella testing is being done in this establishment.

2. Carcasses are being sampled.

3. Ground product is being sampled.

4. The samples are being taken randomly.

5. The proper carcass site(s) and/or collection of proper product (carcass or ground) is being used for sampling.

6. Establishments in violation are not being allowed to continue operations.

The results of these evaluations were as follows:

Est. #	*1. Testing as required*	*2. Carcasses are sampled*	3. Ground product is sampled	4. Samples are taken randomly	5. Proper site and/or proper prod.	6. Violative est's stop operations
66	√	√	N/A	√	√	N/A
74	√	√	N/A	√	√	N/A
86	N/A	N/A	N/A	√	√	N/A
105	√	√	N/A	√	√	N/A
111	√	√	N/A	√	√	N/A
114	√	N/A	√	√	√	√
120	√	√	N/A	√	√	N/A
158	N/A	N/A	N/A	N/A	N/A	N/A
169	N/A	N/A	N/A	√	√	N/A
190	N/A	N/A	N/A	N/A	N/A	N/A
209	N/A	N/A	N/A	√	√	N/A
271	N/A	N/A	N/A	N/A	N/A	N/A

86, 169, 209 - Although not required by FSIS, these establishments were performing microbiological testing of final products for *Salmonella* species, among others.

Data Collection Instrument for *Salmonella* testing (continued)

Documentation was also audited from the following establishments that were not visited on-site, during the centralized document audit:

Est. #	*1. Testing as required*	*2. Carcasses are sampled*	3. Ground product is sampled	4. Samples are taken randomly	5. Proper site and/or proper prod.	6. Violative est's stop operations
45	√	√	N/A	√	√	N/A
57	√	√	N/A	√	√	N/A
100	N/A	N/A	N/A	N/A	N/A	N/A
118	N/A	N/A	N/A	N/A	N/A	N/A
150	N/A	N/A	N/A	N/A	N/A	N/A
154	N/A	N/A	N/A	N/A	N/A	N/A
237	N/A	N/A	N/A	N/A	N/A	N/A